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## Dermatitis Treatments

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# Dermatitis Treatments

## Collection of treatments used by small animal practitioners

*Kenneth Reinertson, fall '43*

**T**REATMENT of skin diseases, one of the most unsatisfactory and unspectacular of all the branches of veterinary therapeutics, has had scores of suggestions. Only a few of these suggested methods have brought recovery without long periods of treatment which proved a nuisance to both the owner and the practitioner. The etiology of skin diseases can be classified under at least five headings which include nutritional, mechanical, infectious, allergic, and climatic causes and result in correspondingly varied treatments.

The suggestions in this article were collected from prominent small animal practitioners and staff members of veterinary colleges and research laboratories by E. B. Dibbel, D.V.M., of Clearwater, Florida, who has given us permission to print a resume of his collection.

The suggestions are presented to the practitioner for his interest, use, comparison, or rejection, with the realization that many are overlapping in content, some are "shotgun" in character, while others are directed at supplying a suitable product to dispense to the owner.

### Nonparasitic Skin Diseases

Nonparasitic skin diseases are treated according to their severity and probable cause. Commonly indicated treatments may be classified into two groups; the moistening of dry, scaly areas, and the drying, if possible, of moist eczemas. The alleviation of pruritic symptoms and the use of antiseptics when a bacterial cause is known or suspected is included in the treatment of the above conditions.

Following are formulas and suggestions

by contributing veterinarians for use on dry, scaly, skin disorders.

Cottonseed oil seems to be a common favorite for the dry, nonparasitic diseases, and may be supplemented with analgesic or antiseptic agents. Different oils may be substituted for the cottonseed oil, but whatever the content of the mixtures, they are directed at moistening the skin, anti-pruritis, and antiseptics.

### Counteract Drying

In an effort to counteract the drying effect of bathing the patient, the use of 7 percent solution of Volck is recommended. This is a commercial, patented, processed mineral oil sold as a plant spray, which is smeared over the dry, scaly skin before bathing, and has been suggested as being very effective. The user claims that it destroys the fleas, leaves the hair with a better sheen, and is neither greasy nor toxic.

Several practitioners suggest the use of this preparation which is applied daily for five applications, followed by a bath, and then repeated if necessary.

Powdered sulfur	2 ounces
Creolin-Pearson	4 drams
Ordinary motor oil	1 pint

Oil of cade (1-8) in raw linseed oil (or cottonseed oil) was suggested. Its emollient action, not too objectionable an odor, and the bacteriostatic, and consequent antiseptic action makes this a favorite with many practitioners.

A combination of sulfur, sodium bicarbonate, salicylic acid, castor oil, and cottonseed oil (proportions at the discretion of the user) was claimed to be quite effective in dry eczemas.

Crude oil emulsions, such as Haver-Glover Crudol, received praise from a practitioner as being effective in moistening the skin.

### Objectionable to Dispense

The following preparation is used at the Iowa State College Veterinary clinic. This product has a mild antiseptic skin moistening action and is exceptionally good for hospital use but like the other oily preparations it is messy and objectionable to dispense. In place of the cottonseed oil base used in this formula, mineral oil, peanut oil, coconut oil or any other of the bland oils may be substituted.

Zinc oxide	7.5 percent
Zinc stearate	7.5 percent
Cottonseed oil	85 percent

The second group of formulas is for use on moist and weeping eczemas and consists of drying agents and astringents with some of the products containing antiseptics. These formulas have been collected from small animal practitioners and by use have proved effective in treating dry skin conditions.

One part balsam of Peru with six parts of pure grain alcohol is claimed effective as a drying and healing agent which is needed in moist eczemas. This is actually the Pennsylvania mange mixture without the creolin.

Powdered sodium bicarbonate can be dusted or patted on with gauze where there is sufficient weeping to cause the powder to cling. After four or five days treatment, this is followed with boric acid powder which is a good drying treatment and relieves itching. The infra-red rays may be used as supportive treatment after the exudate has dried.

### Glycerine Base

The Kansas State Veterinary College used 20 percent tannic acid in glycerine for moist eczemas with weeping spots and for dogs with tender areas between the foot pads. This acts to dry and toughen the skin without causing it to crack and bleed.

Another preparation is fundamentally the same as some already mentioned except for several added ingredients which classify it as a shotgun remedy.

Salicylic acid	5 Gm.
Tannic acid	5 Gm.
Alcohol	90 cc.
Phenol	$\frac{1}{4}$ Gm.
Balsam of Peru	2 Gm.
Chloral hydrate	2 Gm.
Darimol	1 pint

Another veterinarian used this mixture in minor cases and for dispensing to the owner.

Darimol	1 pint
Green soap	1 pound
Alcohol and water	equal parts— q.s. 1 gallon

The following was compounded by the same veterinarian for hospital use. This preparation can apparently be used for both eczema and mange and is applied every third day accompanied with massage.

Crude oil	1 gallon
Sweet oil	1 gallon
Kerosene	$\frac{1}{2}$ pint
Cream of tartar	$\frac{1}{2}$ pound
Precipitated sulfur	2 pounds
Thymol iodide	$\frac{1}{2}$ pound

### Common Favorite

The common combination of 5 percent each of tannic acid and salicylic acid in alcohol is a favorite among many for use on moist eczemas, with the following variation.

Chloral hydrate	2 ounces
Salicylic acid	2 ounces
Tannic acid	6 ounces
Bathing alcohol	1 gallon

This mixture is applied three times daily and is supported with a corrected diet.

A preparation which is said to be extremely fat soluble and quite penetrating is:

Gasoline	1 part
Benzene	1 part
Spirit of turpentine	1 part
Burned motor oil	2 parts

To one gallon of this mixture one-half pound of moth balls is added. This material should be applied over one-third of the body surface each day for four or five days, followed by a warm bath. Treatment is repeated as often as needed. The same practitioner suggested another treatment which consists of light feeding with raw meat and bulky food such as brown

bread, supported by one ounce of magnesium sulfate given every other day or depending on the relative purgation attained. The magnesium sulfate is discontinued when the intestinal tract is well purged. This practitioner also suggested the alterative treatment of 0.6 grams of neoarsphenamine intravenously (calculated on the basis of a 30 pound dog) repeated in five to seven days if healing has not occurred. Another veterinarian alternated the tannic acid, salicylic acid and alcohol treatment previously mentioned with pyoktanin (proprietary gentian violet solution). Some veterinarians used the previously considered oil of cade-linseed oil mixture for both moist and dry eczemas.

### Ringworm

Ringworm is a less frequently encountered parasitic condition. The Army ringworm solution is a suggested treatment and consists of one and one-half grains of mercuric chloride in one ounce of tincture of iodine. This may be followed by an ointment such as 10 percent sodium thiosulfate. This treatment is also suggested for cats and has been favorably received except where the lesions are so deep as to require incision or probing. The use of iodine or some other antiseptic is then more effective.

### Demodectic Mange

Mange comprises the majority of the parasitic conditions found in small animals, and unfortunately, is the most unfavorable from the standpoint of prognosis and length of time required for treatment.

The commonest treatment of Demodectic mange (follicular mange) today is Canex (Merck) which is an oily mixture containing rotenone. It is applied to the localized areas, or if the lesions are general, to not more than one-third of the body surface at a time. Treatment should not be repeated on an area oftener than once every four or five days. If an animal is presented in a weakened condition the physical condition should be built up before beginning the mange treatment. Bi-weekly baths in lime-sulfur solution and repetition of the Canex treatment after a day's rest is commonly used.

Another choice is the old University of Pennsylvania mange mixture (UPMM).

Creolin-Pearson	5 parts
Balsam of Peru	15 parts
Grain alcohol	80 parts

This mixture is applied daily or every other day to affected parts not exceeding one-third of the body surface.



Characteristic demodectic mange lesions on a dog.

The Ohio State Veterinary College proposed the following formula.

Rotenone	1 part
Alcohol	80 parts
Acetone	10 parts
Oleic acid	10 parts

In preparing this compound the rotenone and acetone are mixed prior to adding the alcohol. After shaking well the oleic acid is then added. This formula was derived in an attempt to make a mixture from which rotenone would not precipitate and is used in much the same manner as Canex.

The following is another treatment of the shotgun variety suggested for follicular mange:

Creolin	30 cc.
Phenol	15 cc.
Flowers of sulfur	8 ounces
Turpentine	120 cc.
Ammonia water	90 cc.
Linseed oil (raw)	600 cc.
Kerosene	1200 cc.
Oil of tar	30 cc.

The strength of this mixture is expressed in the accompanying directions sent in by

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## DERMATITIS

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the contributing veterinarian. "This sure is a potent mixture. It should be applied over the affected parts daily until the animal shows evidence of exhaustion. Then discontinue for four days and repeat."

Another veterinarian finding Canex unsatisfactory used this mixture.

Oil of turpentine	8 ounces
Sulfurous acid (Merck 7%)	1 pound
Oil of tar	6 ounces
Cottonseed oil	q. s. 1 gallon

Apply this to the affected parts daily and if the case is generalized cover the entire body every fourth day. Supportive treatment of nonspecific protein injections subcutaneously, and either Fowler's solution, or strychnine may be used.

Cases of sarcoptic mange are treated by routine bathing with lime-sulfur solution which has proved an overwhelming

favorite. A warmed 3 percent solution of liver of sulfur,\* freshly prepared, may be preferred when the lesions are localized in small areas.

### Diet Consideration

According to many practitioners, the importance of diet in treating skin diseases is not to be overlooked. Checking and completely changing the diet regardless of the previous diet not only tests for food allergy conditions but is a step toward making the owner more diet-conscious. In skin cases predisposed by malnutrition the dietary corrections should accompany the direct treatment. Deficiencies of vitamin A, nicotinic acid, and possibly vitamin C are responsible for some of these skin disorders, while overfeeding and consequent obesity are responsible for many others. The practitioner may well remember the value of corrective diets in handling these cases.

\* Liver of sulfur (Potassa Sulfurata U.S.P.) is a mixture composed chiefly of potassium polysulfides and potassium thiosulfate.

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